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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,328	04/01/2004	Qiang Ding	PAT034369-US-NP	1133
29490 7590 08/04/2010 GENOMICS INSTITUTE OF THE NOVARTIS RESEARCH FOUNDATION 10675 JOHN JAY HOPKINS DRIVE, SUITE E225 SAN DIEGO, CA 92121-1127				
			EXAMINER BALASUBRAMANIAN, VENKATARAMAN	
			ART UNIT 1624	PAPER NUMBER
			NOTIFICATION DATE 08/04/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IPLegal@gnf.org

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### Office Action Summary

**Application No.**

10/817,328

**Applicant(s)**

DING ET AL.

**Examiner**/Venkataraman  
Balasubramanian/**Art Unit**

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7, 8, 11, 12 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7, 8, 11, 12 and 19-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicants' response, which included amendment to claims 12, 19 and addition of new claim 23, filed on 5/21/2010, is made of record. Claims 7, 8, 11, 12 and 19-23 are now pending. In view of applicants' response, 112 second paragraph rejection of claim 12 and 19 has been obviated. The following new grounds of rejections are applied to currently pending claims.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. Claim 20 and its dependent claim 21 are improper dependent claims as claim 20 fails to further limit claim 7 on which claim 20 is dependent. Note the first species on page 9 is outside the scope of claim 7. Note 5-position of pyrimidine has methyl in claim 20 which is not permitted in claim 7. The scope of claim 20 is therefore broader than the scope of claim 7.
2. Claim 22 and 23 are recite species which are outside the scope of broadest claim 7. Note in claim 7, L is a bond while claims 22 and 23 permits oxygen and nitrogen linked groups. It should be noted that claim 22 and 23 were newly added claims and during prosecution, applicants have limited the L choice to a bond to over come several applied prior art. Hence, recites species with other L choices would result in applying

previously applied prior art. It is suggested that applicants cancel these species and capture them in the continuation applications. This would also avoid unnecessary obviousness-type double patenting rejections.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 7, 8, 11, 12 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Chyba et al. US 7,125,997.

Chyba teaches compound of formula I which include instant compounds. See column 1, formula I and note with the given definition of Z, R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup>, compounds taught by Chyba include instant compounds. See entire document. Especially see example 6 and example 7.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims, 7, 8, 11, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chyba et al. US 7,125,997.

Chyba teaches compound of formula I for treating leukemia, which include instant compounds. See column 1, formula I and note with the given definition of Z, R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup>, compounds taught by Chyba include instant compounds. See entire document. Especially see example 6 and example 7.

Chyba differs in not exemplifying all compounds with various choices of Z in addition to those taught in examples 6 and 7. However, Chyba teaches equivalency of compounds taught with those generically claimed. Hence, it would be obvious to one trained in the art to make compound of formula I with various Z, R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> as in example 6 and 7, and expect these compounds to have the use taught therein.

Claims, 7, 8, 11, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatt et al. US 7,419,984.

Bhatt teaches several pyrimidine compounds for treating leukemia, which include instant compounds. See column 3, formula shown therein and note with the given definition of X, Y, Z, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>, compounds taught by Bhatt include

instant compounds. See entire document. Particularly, see examples 1-192 and Table I for compounds made. Especially see compound 172, 176, 180, 181, 190, 191 and 192.

Bhatt differs in not exemplifying all pyrimidine compounds with various choices of  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$ , in addition to those taught in examples 172, 176, 180, 181, 190, 191 and 192. However, Bhatt teaches equivalency of compounds taught with those generically claimed. Hence, it would be obvious to one trained in the art to make compound of formula I with various  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$  as in example 172, 176, 180, 181, 190, 191 and 192, and expect these compounds to have the use taught therein.

### **Conclusion**

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (571) 272-0662. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Supervisory Patent Examiner (SPE) of the art unit 1624 is James O. Wilson, whose telephone number is 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAG. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

/Venkataraman Balasubramanian/

Primary Examiner, Art Unit 1624